



THE LAKEHEAD AMATEUR RADIO
CLUB JOURNAL

October 2007
Volume 73 Issue 8

HI-Q

CLUB WEBSITE <http://www.larclub.net>



VE3FW—LARC call sign
honours the memory of the
Founding President
P.J. "Pat" O'Shea

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The Prez Sez:

Well Deja Vue. Been there done that and it looks like I am going to do it again.

One of my initiatives is to have as many guest speakers as possible during the year and I hope most will be of a semi technical nature. No one is going to finish the year being an engineer but I hope it may inspire you to try a new mode or something different in Amateur Radio. There are so many possibilities from public service to literally bouncing signals off rain clouds.



If you have a special interest in some aspect of our hobby and care either to talk on it or want someone to give a talk please contact me and we will see what we can do.

I would also like to especially thank Leo, VE3ATC for being the Editor of Hi Q for the last while. He has taken it to a new height. Also welcome aboard to Ed, VE3SNW who graciously "volunteered" to take share the load as Leo has a well deserved break.

It is said that in most clubs 20% of the members do 80% of the work, one of my other missions this year is to increase the 20% component. I may ask you to do a little more for the LARC.

Anyway enough rambling by me and I look forward to seeing you on Thursday, October 11 at the next meeting.

73 Bill VE3XT

- **NEXT MEETING**
Thursday
October 11, 2007
at the McIntyre Building,
Confederation College
Room 191 at 7:30 pm
- Check out Northern Ontario Swap Net for buying and selling equipment !
- 2007/2008 Membership Renewal is now due!

LARC OPEN ACCESS REPEATERS

VE3YQT	Mount Baldy	147.060 (-600) Phone Patch
VE3TBR	St. Joseph's	145.490 (-600) (100.0 Hz) 442.075 (+5 MHz) 144.390 APRS
VE3BGA	Hillcrest H.S.	145.450 (-600) (IRLP Node VA3LU 123.0 Hz) 442.825 (+5 MHz) (100.0 Hz)
VE3UPP	Upsala	145.470 (-600)

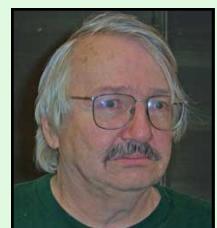


Lakehead Amateur Radio Club

Meeting Minutes

September. 13, 2007

Terry VA3LU, Secretary



Meeting called to order by Terry VA3LU 7.38 pm

Minutes of last meeting as published in Hi-Q

Move to accept as printed by Joe VE3TBX, seconded by Bob VE3BHN.
Motion carried

Treasurer report of last meeting as printed in Hi-Q

Move to accept as printed by Bob VE3BHN, seconded by Brad VE3MXJ.
Motion carried.

Correspondence from Thunder Bay conquer the dog and the Triathlon and the Kids of Steel, thanking us for our help with communications.

Committee's reports

Equipment, Terry VA3LU reported that auto patch on YQT was down in July and Lindo, Laurie and Terry went up to mount Baldy to repair it.

Ares:

Randy VA3OJ brought everyone up to date about the tests at the hospital and north center fire hall and that the equipment was all tested. He also reminded all the members to please update their info with Ares.

Public services:

Brad VE3MXJ updated the members on what has happened over the summer and the upcoming Run for a Cure CIBC and the Santa Claus parade.

Canwarn:

John VA3JMS reported a quiet summer on the weather front.

Old business:

Hymers fall fair, a job well done, thanks to all that helped.

New Business:

Mike VE3EDX asked if there are any volunteers wanting to join the 55 plus VE3SAO amateur radio club. Without some interest it may have to close down. Mike is trying to arrange an open house at the 55 center in October.

Adjournment:

Moved by Mike VE3ZG

Election of new executive for 2007 2008 term

Mike VE3ZG took over for the elections.

President: Bill VE3XT

Vice President: VE3RVA

Secretary: Terry VA3LU

Treasurer: Joe VE3TBX

Directors: Brad VE3MXJ, Randy VA3OJ, Mike VE3ZG and Brian VE3BCQ.

Congratulations to all !!

Terry VA3LU

***A Note on APRS***

Robert VA3ROM has submitted a great article on the basics of APRS. This is well worth reading if you are interested in this technology. It may spark your interest even if you are not currently interested! Thanks Robert!

APRS is alive in our area, with the main digi at VE3TBR on 144.395 MHz. Other digis supplementing the main digi are also operating in Thunder Bay. Robert mentions some websites to check out in his article, and here are some in the Thunder Bay area.

APRS has other uses than tracking vehicles, people, etc!. It is easily configured to be used for tracking balloons, model aircraft, and almost anything that can move!

Our club website <http://www.larclub.net> has the Thunder Bay APRS coverage map at:
<http://www.larclub.net/aprs/aprsthunderbay.htm> This can also be found from the main menu on the club website.

Other websites that have APRS maps, etc in our area:

Warren VE3FYN: <http://www.ve3fyn.ca/aprs/>

Robert VA3ROM: <http://my.tbaytel.net/va3rom/>

Leo VE3ATC: <http://www.spruce.ca/ve3atc/>

A lot more information is available on Google—just search for 'APRS'

73 Leo VE3ATC



Joe VE3TBX

**Lakehead Amateur Radio Club
Treasurers Report**

Opening Balance - Sept. 5th. 2007	<u>\$ 5,482.43</u>
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Income

Interest	\$	-
50/50 Draw	\$	-
Memberships	\$	-
Hats	\$	-
Thunder Bay Triathlon	\$	-

Total Income	\$	-
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Expenses

Thunder Bay Telephone	\$	-
Bank Service Fee	\$	-
Insurance	\$	-
Hi Q Expenses	\$	-
Field Day	\$	-
Hymers Fair Expenses	\$	-

Total Expenses	\$	-
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Closing Balance - Oct. 3rd, 2007	<u>\$ 5,482.43</u>
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**Joe Coghlan - VE3TBX
Treasurer**

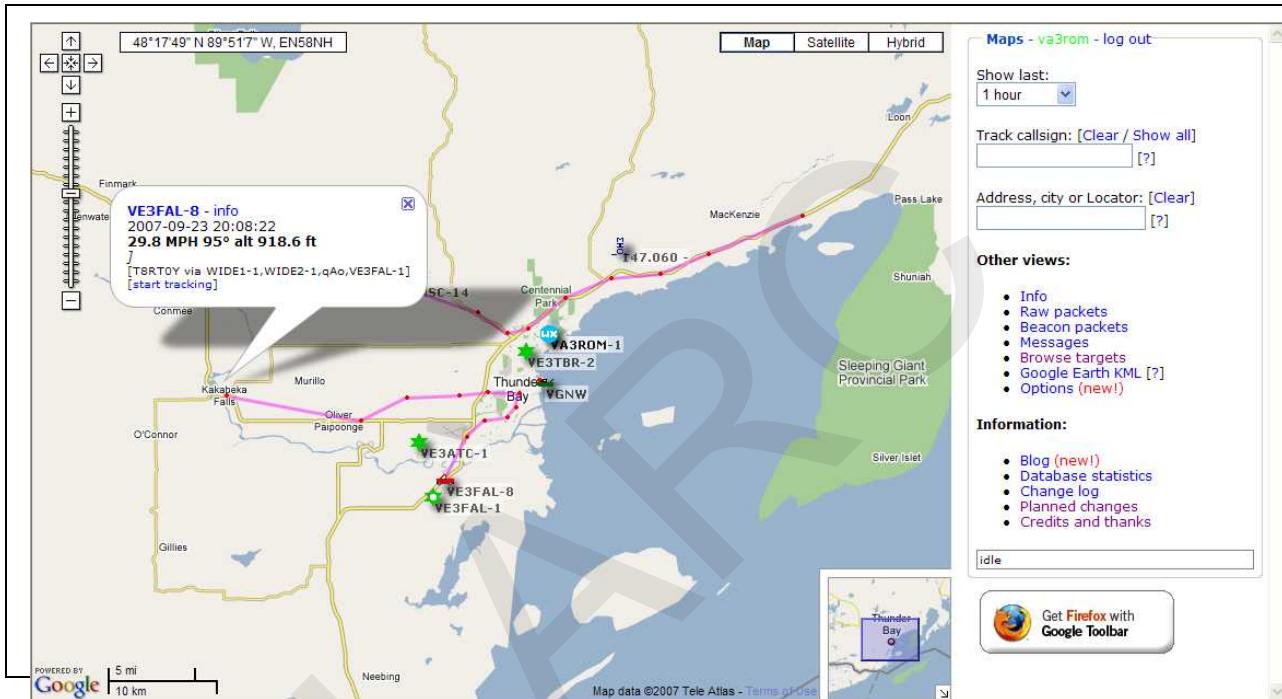


The Wide and Wonderful World of APRS

By Robert, VA3ROM



Before going any farther, just type this URL into your web browser: <http://tinyurl.com/2l8ldt> et voila! You're inside the APRS world and viewing real-time data streaming from the Thunder Bay area. The mapping system used is Google Maps with an amateur radio twist. (The first time you use this link, on any computer, you'll be asked to self-identify. For most of us, we'll use our callsign, but you can type in anything.)



Above is a sample screen capture of data from 23 September at 2008 local time. You can select various times and other program settings/units (metric, imperial, UTC, local, or a mixture,) using the Options menu link on the right hand side of the screen.

Here, I'm displaying the default 1-hour view, and spotted VE3FAL-8 trucking around the area. Notice the map, icons, lines and dots. The purple line is the track that Fred traveled, and the dots along his track line are the transmitted waypoints and other data from his D7 and GPS. You can click on each dot to see what his vehicle was doing at that exact instant.

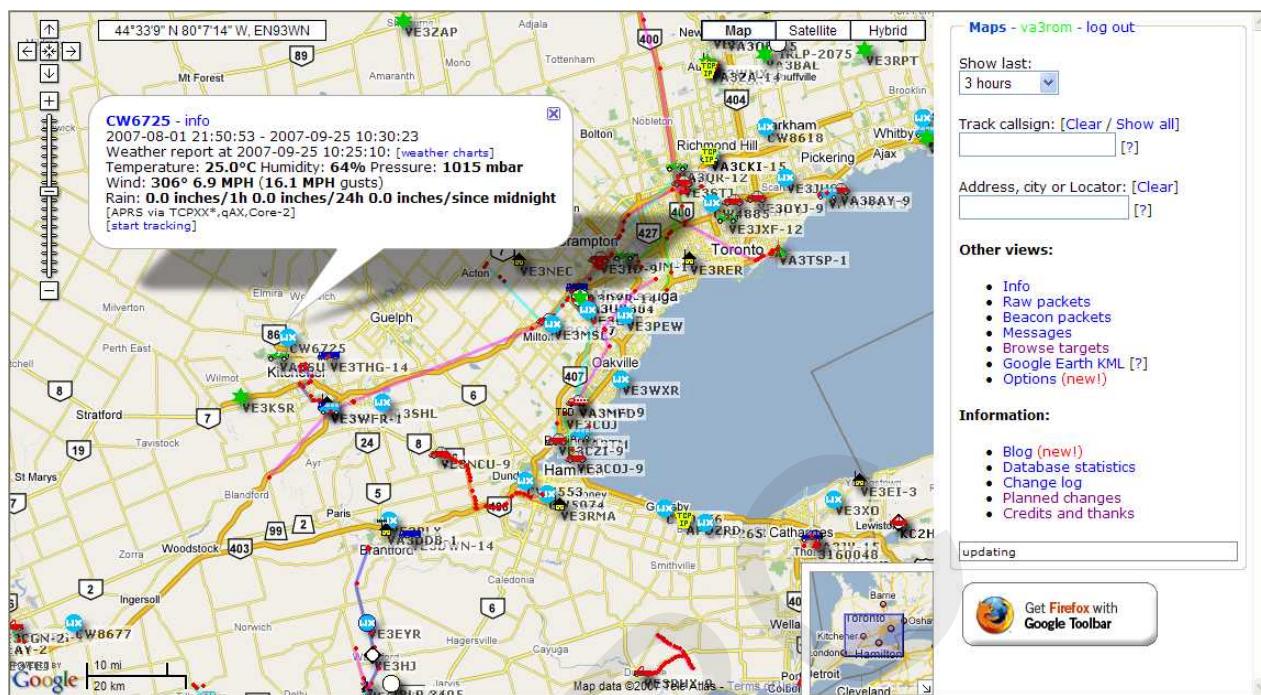
This is called a Graphical User Interface, and a Geographical Information System (GUI pronounced "gooey" and GIS). This means that raw data (binary 1's and 0's) are presented in a pictorial format on a mapping system with text used where required. *"A picture is worth a thousand words."* You don't have to know anything about APRS to use this site, which was created by some brilliant amateur radio operators/programmers. Some of the text data may not make any sense, but most of it should.

The added benefit (some say not) is that any person, ham or otherwise can access and use the site! You can't

change or input any data, but your non-hams friends and family may get inspired to become hams so that they can transmit data into the system!

APRS is an acronym for the Automatic Packet (or Position) Reporting System and was developed, in the early 1990's, by Bob Bruninga, WB4APR, a real power-user in the old packet radio world. Pick up any book about packet from the 1980's and you'll see Bob's name somewhere. Packet radio is just data (telemetry is another term) transmitted in discrete bundles or packets using a specific electronic standard or protocol (called AX.25 in this case). You don't have to understand or know anything about packet radio, for the most part, since it's all preprogrammed into the hardware or the software that hams use today.

For example, most of us drive fairly sophisticated cars, compared to the 1980's, but don't know much about the auto-mechanics/electronics except for some basics, yet we can all drive them to most places that we want to visit. APRS is just like a car and you can get as involved in what goes on under the hood as you want, or not. You can take it for a drive at anytime, and enjoy the trip, as long as you follow the road!



Tune your 2m FM radio to 144.390MHz and listen for a bit, you'll hear the distinctive tones/sounds of packet radio. You can even decode those sounds into straight text with simple decoding software and your sound card, or that old TNC doorstop (terminal node controller used for packet radio transmitting and receiving.) About 50 percent of APRS is backwards compatible to old packet radio, so most of the text will be in some readable form that you can understand with a lot of gibberish also. This "gibberish" is converted to pictorial information and displayed along with any text on a GIS. In this case it's Google Maps, but it can be one of many APRS programs, such as UIVIEW. I won't go into details about how data from radio or Internet travels along the system and ends up at the aprs.he.fi web site. Sufficed to say, each desired coverage area needs at least one or two base stations with a radio and Internet connection along with the appropriate APRS software (www.ui-view.org and <http://www.soundcardpacket.info/>).

Now, why would anyone want to do all this? Well, you can scroll the map from Thunder Bay down to Duluth. Notice that there's a lot more happening there? Perhaps you've never been to Duluth, or New York or Paris, and want to know what the local repeater frequencies are, weather at specific areas that may differ from the airport weather, any points of interest to see. Where are the APRS stations in town? What is the local IRLP link information? Is there an Info Kiosk available? You can check into your hotel room, plug your laptop into an Internet jack, and browse the aprs.he.fi site around Duluth, or any other major city in the world. No radio, no electronics, no detailed knowledge about how it works and all from the privacy of your room. No one even knows that you are out there watching! Civil libertarians

may cringe, but if you use any kind of plastic card today, or have any kind of papers with numbers on them, then you're being tracked, catalogued and watched by someone, somewhere in the world from cradle to grave. For 99.99 percent of people, the data that we transmit is for use and the benefit of others, in the true spirit of amateur radio, so watch away!

Perhaps in another 5 to 10 years, everyone on earth will be using a similar GIS to ours, and it will probably be accessible through our HDTV systems! The uses by police, fire, hospital, ambulance, EMO, air and marine services to name a few, will be very common place in a few years. VHF-RDF (radio direction finding) is another popular use of APRS by hams. If you travel around the world using the aprs.he.fi site, you'll be able to click on the various icons displayed, and read the text in their popup information balloons. There may be even more links inside those balloons to follow. Some stations will be fixed and transmitting repeater info, weather telemetry, or fire, flood, and other warnings. You'll see mobile stations, cars, trucks and perhaps search and rescue aircraft (SAR craft). There'll be boats and ships in water areas to watch and track, especially in the really busy shipping lanes. You'll see beacons from people camping, hiking, walking and biking. Hams have put trackers on balloons and into outer space (www.sbszoo.com/bear and www.sbszoo.com/bear/sable/sable3.htm).

Both the space shuttle and international space station (ISS) have APRS stations that transmit data daily to ham stations on earth. Thunder Bay happens to sit right on one of the main satellite "orbital shipping lanes" and has a great radio and visual view of them passing overhead (www.heavens-above.com).



If your interest is peaked a bit, you may want to become an active participant and transmit data into the system. The basic equipment is pretty much bought right off of the shelf. You'll need a 2m radio HT, a GPS with a standard serial NMEA input and output (NMEA is just another electronic protocol for sending and receiving GPS data so don't panic!) and finally the tracker hardware. Byon (www.byonics.com) has everything that you need to start out as a portable or mobile APRS station with one-stop shopping. The tracker comes with free software so that you can program your callsign and various other parameters for it to use, and it's pretty much plug 'n play for anyone who can open up their computer and install cards or memory. If you aren't that technical, there are several hams in the area that can program your tracker, and help you hook up your HT. Byon now offers an 8-watt dedicated radio and tracker combo so you don't have to tie up your HT!

When you've seen it done once, you'll see that it's really not that hard to get started. The tracker needs to be programmed once since the standards for portables and mobiles don't change between Canada and the U.S. Both countries use 144.390MHz as the common transmit/

receive frequency and the same packet radio protocols. Of course you'll have to be in range of another APRS station that can receive your beacon and relay it via radio and the Internet and almost instantly appear on the aprs.he.fi site. As you physically move, so too will the icon representing your station. If someone wants to track you and only you, the map display will start moving with as you move around!

Now, if you have a few more dollars to spend, many APRS portable/mobile stations use a Kenwood D7, which is a VHF/UHF dual band radio with built-in TNC and packet radio system. Just add a GPS and away you go, but with the ease of use and versatility, you get a higher price tag. If you really want to go whole-hog, you can connect a pocketPC to a D7 with a GPS, and run a program called APRS/CE (www.aprsce.com). This will create a computer controlled, fully portable/mobile APRS station with more features and capabilities, but again at a higher price. It is very handy and useful for setting up emergency stations, and for texting and transmitting data/telemetry from the field, plus all data/telemetry that is received can be stored into a handheld GPS, and displayed later for analysis.



Finally, if you have Google Earth installed you may prefer using it to display information. You can create a Google Earth kml (another web programming language) file using the aprs.he.fi menu system. I find that it (Google Earth) displays data faster in heavily congested areas, but each mapping system has it's own features and faults. For the most part, Google Maps works well in our part of the world since the number of stations isn't overwhelming.



As you can see, there's a lot happening with APRS in the lower Great Lakes area. So, if you're new to that area, you can get a lot of information just accessing the aprs.hey.fi site and zooming in for a closer look-see. In fact, there can be too much information and it can be overwhelming if you don't refine your area of interest. The aprs.hey.fi site has controls and filters that allow you to do this to eliminate the "clutter."

The system remembers each and every beacon that you transmit from day one. It also remembers the last known beacon position transmitted. If you ever wander off the beaten track, searchers will have a known point of reference from where to start. There are so many obvious and not so obvious uses for APRS that it can be mind-boggling. So, don't get too wrapped up in the technical

details if you aren't a technical kind of person. Take it for a drive and see if you like it or not. You may prefer to just sit on the aprs.he.fi web site and go no farther, and that's fine. But, you may see someone's emergency beacon flare up the site one day, and you alert the authorities and perhaps save a life. Sure. It's fun, it's a hobby, but it's also something that can be used when all else fails.

73 DE VA3ROM (<http://my.tbaytel.net/va3rom>).

APRS is a registered trademark of Bob Bruninga, WB4APR. Amateur radio operators are allowed to use it freely for non-commercial, not-for-profit amateur radio applications.



A Note on APRS

This is something you can add as a note about our APRS system. I got an email response back from John, VE3UJK, who was passing through last week. It makes me feel great that the system is being used and appreciated, especially because they are so far and few between up here.

Hello Rob, I'd be glad to help out. I was running 10W to a 5/8 wave mag mount on the roof of my Ford Edge. The APRS system is very simple -- an "OpenTracker" similar to the TinyTrak. Beacon time set at 5 minutes. My wife and I pass thru the area every summer on our way to Edmonton where my eldest son and his family live. My rig is a Yaesu 1500 VHF only.

Keep up the good work re: APRS. The IGATEing is very useful for friends and family who wish to Google my SSID via the internet and keep aware of our progress.

73,

John, VE3UJK

Makes all the hard work and effort by everyone worthwhile when you get one of these once in a while, eh?

73,

Robert VA3ROM



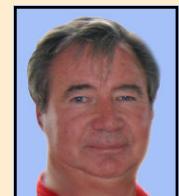
Northern Ontario Swap Net

<http://users.xplornet.com/~ve3pdpat/nontsale.htm>

Or use link on
Larclub.net

LARC ARES
2 Meter Net
Every Tuesday
 at
7:00 pm
 On YQT !!

Editors Note:



This will be my last issue as Editor!

Ed VE3SNW has offered to look after HI-Q upon my leaving this position.

I know Ed will do a great job and has the interest to keep our Newsletter active and will continue to make improvements!

Each editor has their own style, and changes to the layout and content are always welcome and sometimes very much needed!

The position is demanding and finding local content is highly dependent on our members. I am sure Ed would appreciate your input for articles, photos, and any interesting subjects that can be of interest to others.

I have offered to assist Ed in any way he requests for future issues.

Thanks to everyone who have expressed their opinions and comments during my tenure.

73

Leo VE3ATC

THE LAKEHEAD AMATEUR
RADIO CLUB JOURNAL

LARC—Suite 184
1100C Memorial Ave.
Thunder Bay, Ontario
Canada P7B 4A3

Club E-mail: VE3FW@rac.ca

LARC Website
<http://www.larclub.net>

Hi-Q Editor and Publisher
E-mail: ve3atc@spruce.ca
Leo VE3ATC 939-1020

Hi-Q is published monthly on the Sunday preceding the monthly meeting. Monthly meetings are held on the second Thursday of each month, except for July and August. Your submissions are welcome at any time. Submit early to ensure publication in next issue! Send to editor at ve3atc@spruce.ca



LARC is a member of [RAC](#)

LARC PUBLIC SERVICES

ARES

District Emergency Coordinator
VE3FAL Fred Lesnick 577-0789
Assistant

VE3MXJ Brad 767-0628
Emergency Coordinator
VA3OJ Randy Gottfred 474-0910

CANWARN

VA3JMS John 767-3631
VE3MXJ Brad 767-0628

Public Service Events

VE3MXJ Brad 767-0628
VA3JMS John 767-3631

Amateur Radio
Accredited Examiner

VE3FAL Fred Lesnick 577-0789
flesnick@tbaytel.net

RAC

[Radio Amateurs of Canada](#)

LARC	Keith Fiske	VE3JQ
SENATE	Pat Doherty	VE3PD
	Dave Kimpton	VE3AVS
	Laurie Bridgett	VE3BCD
	Terry Stewardson	VA3LU
	Ed Baumann	VE3SNW

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EXECUTIVE	Bill Unger	VE3XT	344-1848
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	Bob Hansen	VE3RVA	767-6924
	Secretary		
	Terry Stewardson	VA3LU	577-9439
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	Brad Harris	VE3MXJ	767-0628
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	Mike Nawrocki	VE3ZG	767-1714
	Brian Bolt	VE3BCQ	
	Past President		
	Terry Stewardson	VA3LU	577-9439

About LARC

Lakehead Amateur Radio Club members have all levels of interest and knowledge in the wide spectrum of amateur radio.

Monthly meetings and contact with other members allow us to share and discuss different ideas, and to learn from each other.

LARC membership meetings are held the second Thursday of each month, September through June at 7:30 PM local time at the McIntyre Building, Confederation College Room 191

Each meeting consists of a mix of technical and light-hearted topics, with a break for meeting friends and new friends.

Anyone with an interest in ham radio is invited to join us. Amateur radio classes are also administered by LARC to help you with your Amateur Radio License contact any of the Executive members above for more information



2007/2008 MEMBERSHIP/RENEWAL APPLICATION

LAKEHEAD AMATEUR RADIO CLUB INC
1100C MEMORIAL AVE, SUITE 184,
THUNDER BAY, ONT P7B4A3

FULL MEMBERSHIP

\$35.00 – Full Membership open only to licensed amateurs

NAME: _____ **EMAIL:** _____

ADDRESS: _____ **CITY:** _____

TELEPHONE: () _____

POSTAL CODE: _____

MAY WE PUBLISH THE PHONE NUMBER yes / no

MAY WE DELIVER Hi-Q BY E-MAIL? yes / no

Are there any changes to your membership
details from last year? yes / no

CALL(S) _____

FAMILY MEMBERSHIP

Immediate family residing at the same address
and holding licenses.

\$35.00 plus \$10.00 for each additional amateur.

NAMES AND CALLS

STUDENT MEMBERSHIP

\$15.00-open to persons enrolled full time in
an education facility,
list School and program

SCHOOL: _____

PROGRAM: _____

**Please mail or bring this form to the next meeting
with your cash or cheque for membership fees.**

**Cheques should be made payable to
Lakehead Amateur Radio Club.**

**Applications and cheques can also be dropped
off at the above address.**

ASSOCIATE MEMBERSHIP

**\$20.00-upon approval of the Board
and open to:**

1. Non holders of an amateur radio license.
2. Licensed amateurs living outside the immediate
Thunder Bay area or are unable to attend regular
meetings of the club.

**If you feel you qualify for associate
membership, please indicate why,
on a separate sheet, to be used by the
Board to consider your application.**